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MEDICUS.

ZAUFAL'S SPECULA,
FOR THE
EXAMINATION
OF THE
NASO-PHARYNGEAL SPACE
AND THE
TREATMENT OF ITS DISEASES.

BY

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REPRINTED FROM THE TRANSACTIONS OF THE
AMERICAN OTOLOGICAL SOCIETY FOR 1878.



ZAUFAL'S SPECULA.¹

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IN 1875 Prof. E. Zaufal, of Prague, described, in the "Prager Med. Wochenschrift" and other medical periodicals, specula which he had devised for the examination of the naso-pharyngeal space and the treatment of its diseases. A *résumé* of what had been done by others and his own experience is contained in a paper by him in the "Archiv für Ohrenheilkunde," Band xii., 1877, pp. 243, 281, a reference to which will render further citations at this time unnecessary. He has this year published two additional papers on this subject in the "Prag. Med. Wochenschrift," which I have not seen, one of which is in reply to Professor Voltolini, who, in the same periodical, disputes Zaufal's claims to originality, and denies the availability of the method.

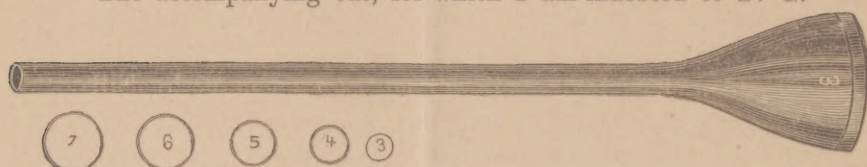
I have used the specula repeatedly on my own patients with much satisfaction, and in one case of adenoid granulations with benefit to the patient. I am not able to discuss or decide the question of originality, but if Voltolini undertakes to deny the usefulness of the method he shows that he has not fully mastered it.

A new thing almost of necessity meets with opposition. These specula were also criticised by Professor Von Schrötter, of Vienna, who said (I quote at second hand from memory) that the large ones are too large to enter the nose, and the small ones are so small that one can see nothing through them. As I am able to use them satisfactorily on my patients I can only account for such a statement by supposing that the

¹ Reprinted from the Transactions of the American Otological Society for 1878.

Professor, an accomplished laryngoscopist, had not seen them properly used, and therefore did not fully understand their use. For the same reason, as I am informed by a private letter from Vienna, written in February of this year, so able a teacher as Professor Grüber had not then gotten beyond the Von Schrötter stand-point. The introduction of them and the *recognition* of what is seen are matters of very considerable difficulty, so that without special instruction therein one will be very likely to find them of but little value. Professors Von Troeltsch and A. Politzer, to whom otology owes so much, commend the method, and advised the writer to visit Professor Zaufal in order to learn it.

The accompanying cut, for which I am indebted to F. G.



Otto and Sons, of New York City, who published a description of these instruments in the "Medical Record" for July 20, 1878, p. 59, to which I beg leave to refer, shows their shape and the size of the smallest. There are five sizes, which receive their numbers from the calibre of the tube, expressed in millimeters, — 3, 4, 5, 6, and 7. Professor Zaufal proposes to have in addition a number 2, as it occasionally happens that number 3 cannot be introduced.

They are made of German silver (*Neusilber*), or hard rubber, 11 centimeters ($4\frac{1}{2}$ inches) in length. The numbered circles are intended to represent the small ends, but are all a little too large. The metal speculum is thinner than that of the same number made of hard rubber, consequently for the same external size a greater internal diameter and view can be obtained, — a point of much importance. They are polished internally, in consequence of which the illumination is much better. The hard rubber speculum is lighter and sometimes more agreeable to the patient, but the light is not so good and the surface seen is smaller; but on the other hand

it is not injured by chemicals, nor heated by the galvanocautery. These instruments are not intended to supplant the rhinoscopic mirror, but to supplement it; for it must be distinctly borne in mind that there are cases in which they cannot be introduced on account of narrowness or crookedness of the inferior nasal passages, and also cases in which the rhinoscopic mirror cannot be used on account of want of self-control on the part of the patient, or structural conditions that may entirely prevent its use.

Before attempting to introduce for the first time one of these specula, an inspection of the anterior nasal passages should be made, for which there is probably no better instrument than Charrière's dilating bivalve speculum. This preliminary examination will show the position of the septum narium, of the inferior and middle turbinated bones, and the width of the nasal passages. It may also show that the posterior wall of the pharynx is visible, though it is seldom so much so as to render the speculum useless. Thus we obtain important data, and are enabled to choose the instrument most likely to pass into the naso-pharyngeal space. This, if of metal, is to be warmed slightly before introduction, for the greater comfort of the patient, and to prevent the condensation of the moisture of the breath upon its polished interior surface and the consequent obstruction of the view.

Professor Zaufal does not use any lubricating material, but the writer finds that a small quantity of vaseline smeared upon the outside of the speculum facilitates its introduction. The aural or laryngoscopic mirror with head-band is used, and for illumination either ordinary daylight or such source of artificial light as may serve for the ear or larynx. The greatest gentleness of manipulation is requisite, to avoid giving pain or injuring the mucous membrane. By gently rotating the speculum as it advances, and by following the end with the eye, it may be made to avoid projecting points and to displace swollen tissues. If it is in the inferior meatus the end must be kept along its floor, and should not be allowed to press against the septum. In some cases the inferior meatus is im-

passable, but the middle may give sufficient room for the tube. When this is the case care must be taken not to depress the external end too much. The view obtained by this latter method is not so satisfactory usually as that by the inferior meatus. It is proper to commence with one of the smaller sizes; 3, 4, and 5 will be found those most generally useful. Either of these presents a very small field, but it is seen *direct* and erect, and by various movements, which the parts will usually permit, a quite large surface may be inspected, consisting of one half the posterior wall of the upper pharynx with the pharynx tonsil, Rosenmüller's fossa, the mouth of the Eustachian tube, and the roof of the soft palate or levator veli palati. But in order to recognize these objects movements must be obtained. This is accomplished by phonation; the patient or subject is directed to make the vowel sounds; the *e* long drawn out gives the best results. One sees then the levator veli palati move directly upwards; the inner or posterior lip of the Eustachian tube, the plica salpingo-pharyngea, moves up and inward; the outer lip of the tube, the plica salpingo-palatina, — called also the tensor palati, the dilatator or abductor of the tube, — moves slightly downward. These three (3) parts inclose the ostium tubæ, which is recognized as an opening pointing outward, but is seen in profile and not looked into directly.

Is it necessary to detail the advantages of this view of the mouth of the Eustachian tube to an otologist? Do you question whether there is a practical advantage in being so very easily able to make applications under the guidance of direct vision to the parts thus brought into view? Caustics can be applied to thickened tissues, new growths, or ulcers; the galvano-cautery is used by Professor Zaufal constantly to destroy small adenoid granulations, or to reduce thickenings of the tissues. For this purpose the speculum is pushed against the part to be cauterized, which is in full view, so as to isolate it from neighboring parts; the electrode is introduced and placed in contact with the surface; the poles are closed for an instant; a crackling sound is heard; the electrode is drawn away, and the circuit

broken. A small eschar is seen when the smoke is blown out. This can be repeated on as many points as it is desired to burn; no neighboring part is affected, and there is no possible soiling or fouling of the apparatus by the mucus, etc., of the nose and throat.¹

The eschar made has very little depth. Owing to the high degree of heat used and the low degree of sensibility in the parts, there is almost no pain felt. These applications are repeated about once a week. Small granulations may be thus removed; large ones, if pedunculated, are removed by means of a long-armed Blake's snare, which Zaufal has modified for this purpose. The Eustachian bougie may be introduced under ocular guidance. The movements of the mouth of the tube and the neighboring parts during swallowing, speech, etc., have been carefully studied by Professor Zaufal.

In order to learn this method it is advised that the parts be specially studied upon the half-head, either fresh or preserved in alcohol. The speculum can then be introduced with facility, its movements seen, and what can be done by this means easily understood, much more readily than if they are first attempted on a patient, when there is apt to be so much motion of the parts that the unpracticed eye recognizes nothing. But as the speculum may remain in position almost indefinitely, an immense advantage that it possesses over the rhinoscopic mirror, all the time needed can be taken for careful study. The long *e* should be sounded in a low tone, when the movements already described occur.

It is not intended to go fully into all the uses of these most valuable instruments. Enough has been said to show what may be done by their aid.

Priority of invention is now awarded to him who first publishes his work to the world. Dr. R. F. Weir, of New York City, about ten years ago inspected the naso-pharyngeal space

¹ Compare this method with one described in the *Medical Record*, December 30, 1876, by Dr. R. P. Lincoln, who introduces the electrode from below. It is provided with a circular protecting shield and spiral spring, on which the secretions of the parts must collect, making perfect cleanliness impossible.

by means of tubes (not funnel-shaped) introduced through the inferior meatus of the nose, but unfortunately he did not push his invention to practical results, nor publish what he had done. Therefore the world will speak of Zaufal's specula, and, *in time*, otologists will thankfully use them.

The writer must express his surprise that these instruments have as yet received so little attention from our American writers. Burnett, whose "Treatise on the Ear," Philadelphia, 1877, is the last new work on this subject published in the United States, on pp. 411, 412, under the head of treatment of chronic catarrh of the middle ear, says: "Great benefit may result from making various applications to the mouth of the tube (Eustachian), but no further inward . . . Much good may be thus done by touching the faucial region of the tube with nitrate of silver," but absolutely no mention of Zaufal's specula is made in this chapter. They are only spoken of in connection with the movements of the mouth of the Eustachian tube, on p. 117, as "long funnels armed with mirrors, introduced into the nares, and passed back into the naso-pharynx."

I am sorry to say that Roosa, in the fourth (1878) edition of his excellent "Treatise on the Diseases of the Ear," does not mention these specula.

The writer then introduced metal speculum No. 3 into his own left nostril, and demonstrated to the members present the naso-pharyngeal space, the mouth of the Eustachian tube, and the movements that he had just described.

